

The Afghanistan Agrometeorological Monthly Bulletin



Issue No. 33

November 2007



Page 2

Page 4



Wheat Crop Condition



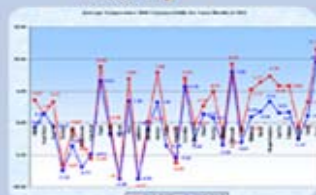
Synthesis Situation Map

Page 5

Page 6



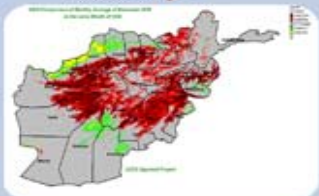
Rainfall Situation



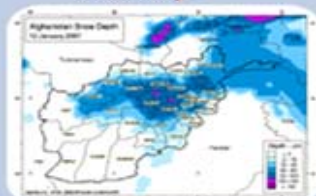
Rainfall Graphs

Page 10

Page 13



Comparison of NDVI



Afghanistan Snow Depth

The Agromet Project of USGS, supported by the US Agency for International Development (USAID), is working together with the Ministry of Agriculture and Irrigation and the Afghan Meteorological Authority (AMA) of Ministry of Transport (MoT).

Agromet Network



Table of Contents

| | |
|---|----------|
| Crop Information..... | 1 |
| • Cereal Crops Phonological Stages..... | 1 |
| • Adverse Factors..... | 2 |
| Rainfall Situation..... | 3 |
| • Rainfall Situation..... | 3 |
| • Rainfall Graphs | 4 |
| • Average Temperature..... | 5 |
| • Maximum and Minimum Temperature..... | 6 |
| Normalized Difference Vegetation Index (NDVI)..... | 7 |
| • Normalized Difference Vegetation Index..... | 7 |
| • Comparison of (NDVI) | 8 |
| Other Information..... | 9 |
| • Comparison of Snow Extent and Depth..... | 10 |
| • Afghanistan Snow Depth..... | 11 |

Summary

Comparison of rainfall for the month of November 2007 with the same month of long term average shows significant decrease of rainfall during the month of November 2007 all over the country.

Zaranj with 33 ° C was the warmest area of the country and Cheghcheran with 13.5 ° C experienced extreme cold during the month of November.

Cereal Crops Phenological Stages

Central Region:

In most parts of this region as in Sarubi, Paghman and Karizmir Districts of Kabul Province, Dara and Dashtak Districts of Panjsher Province, Mahmud Razi center Kapisa Province, wheat cultivation has been finished. In Charikar, Chak and Jaghatu Districts of Wardak Province, wheat seed or plant is passing its dormancy stage.

East Central Region:

Reports are indicating from Panjab District and center of Bamyan Province that winter wheat is in planting stage. While in Yakawlang District of Bamyan Province winter wheat is in emergence stage.

North Eastern Region:

In most parts of this region wheat is in planting stage as in Imam Sahib.

Eastern Region:

In most parts of this region as Asmar district and Asadabad center of Kunar Province reports are showing that wheat is in planting stage. In Mihterlam center of Laghman Province reports are showing that 40% of wheat is in planting stage and 30% of wheat is in germination stage.

South Eastern Region:

In most parts of this region as Tera and Gardez Districts of Paktya Province, Urgun and Khairkot Districts and Sharana central Paktika Province that wheat is in emerging stages, in Muqur and Sardy Districts of Ghazni Province wheat is in dormancy stage, in Khost Province that wheat is in planting stage.

Southern Region:

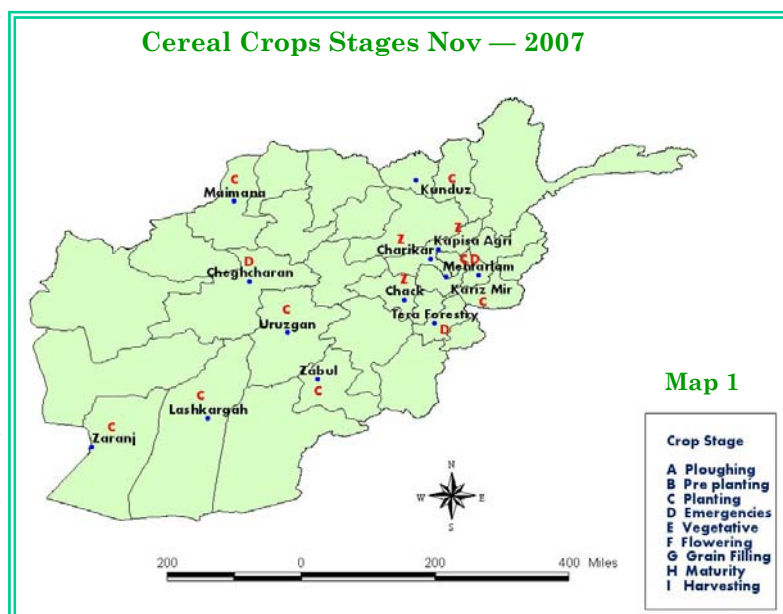
Reports are indicating from Nimroz, Zabul, Kandahar and Hilmand Provinces that wheat is planting stages. Chahar Dara, Aqtipa and Qali-i-Zal Districts and central Kunduz Province, Bangi District and central Takhar Province, Baghlan and Badakhshan Provinces.

Northern Region:

Reports from Faryab, Shibirghan central Jawzjan Provinces, Saripul Province, Dehdadi and Nahri Shahi Districts of Balkh Province, are indicating that wheat is in planting stages.

Western Region:

Reports are indicating from Muqur District and Qala-I-Naw central Badghis Province that wheat is in planting stage. In Farah and Ghor Provinces wheat is in emergence stages.



Rainfall Situation

Rainfall for the month of November 2007 had significant decreases compared to the same month in 2006 all over the country. Comparison of rainfall data for the month of November 2007 with the same month in 2006 is shown in (chart 1).

The month of November was very dry and no sufficient precipitation occurred in most parts of the country, however less amount of precipitation recorded in limited areas but not considerable, more rainfall is needed to ensure the water resources.

The percentage +/- of rainfall is as follow:

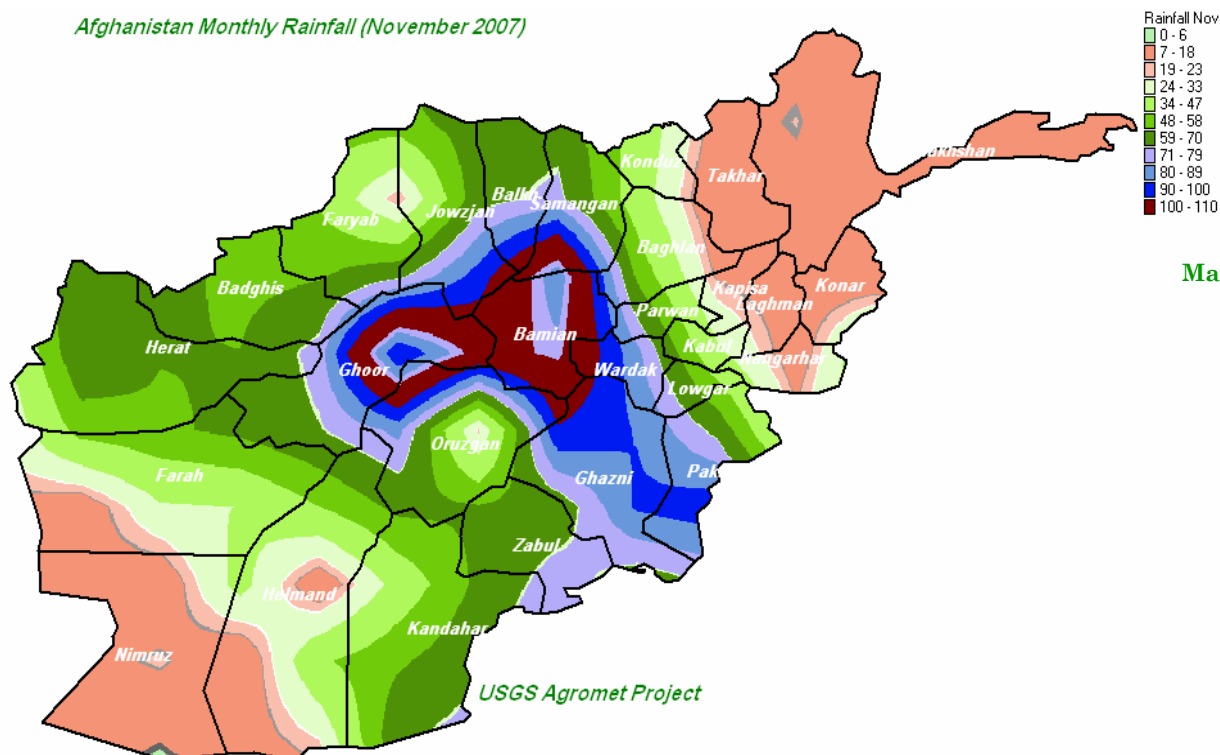
In Baghlan -100 %, Darul Aman -97 %, Faiz Abad - 100 %, Farah - 100 %, Gardiz -91 %, Ghazni -91 %, Ghaziabad - 17 %, Heart – 100 %, Jabul Seraj -100 %, Jalalabad -100 %, Kabul -99 %, Kandahar -100%, Kariz Mir -98 %, Kunduz -99 %, Logar - 100 %, Maimana -100 %, Mazar --100 %, Paghman -96 %, Sheberghan - 97 %, Sarobi - 100 %,Sari Pul, - 98 % and Taluqn -94 %.

Comparison of rainfall for the month of November 2007 with the same month of long term average (chart 2) shows significant decrease of rainfall during the month of November 2007 compared to the same month of long term average all over the country.

Dryness during the month of November will threat upcoming agricultural season and adequate precipitation is needed to cover the luck of water around the country.

The percentage +/- of rainfall is as follow:

In Baghlan - 100 %, Darul Aman - 14 %, Faiz Abad - 100 %, Farah –100 %, Gardiz - 45 %, Ghazni - 64 %, Ghaziabad - 100%, Heart – 100 %, , Jabul Seraj - 100 %, Jalalabad - 100 %, Kabul - 95 %, Kandahar - 100 %, Kariz Mir - 96 %, Kunduz - 92 %, Logar - 100 %, Maimana - 100 %, Mazar - 100 %, Paghman - 91 %, Sheberghan - 93 % and Sarobi - 100 %.



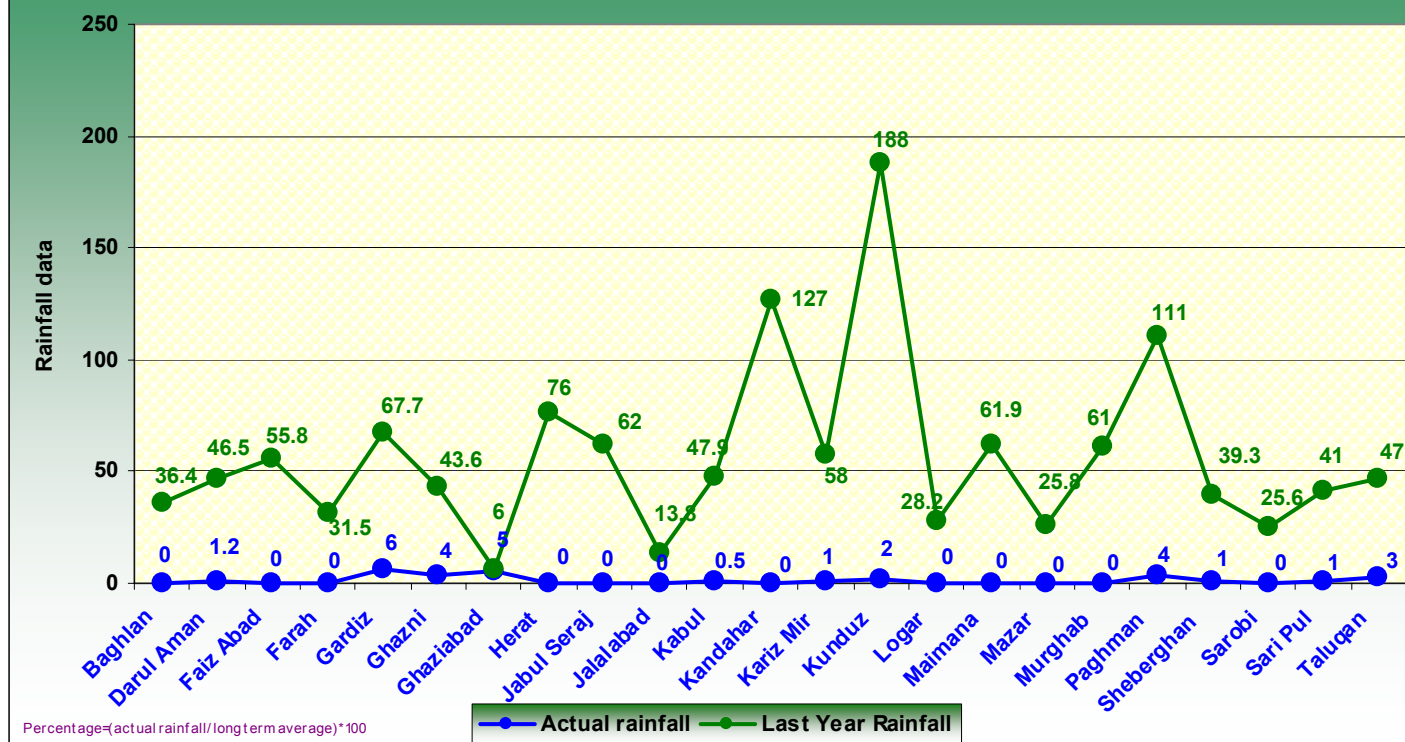
Distribution of rainfall was variable during the month of November 2007 in different regions of the country. As map (2) shows some parts of the Central Highlands and some parts of the Capital

region experienced more rainfall than other regions, for the Northeastern and Southeastern regions less amount of rainfall has been recorded.

Rainfall Graphs for the Month of November 2007

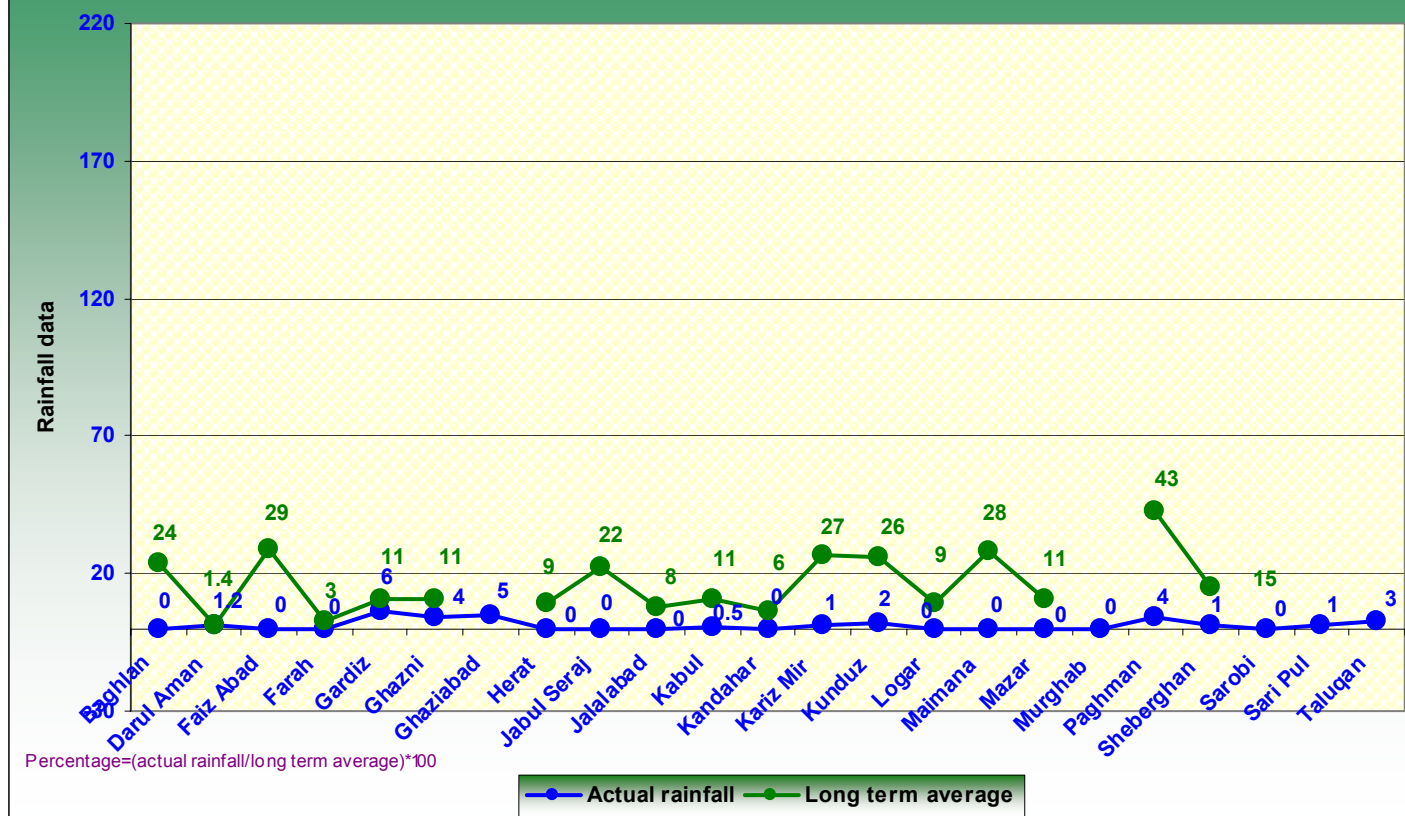
Comparison of Actual and Last year Rainfall (November 2007)

Chart 1



Comparison of actual and long term average accumulated data (November 2007)

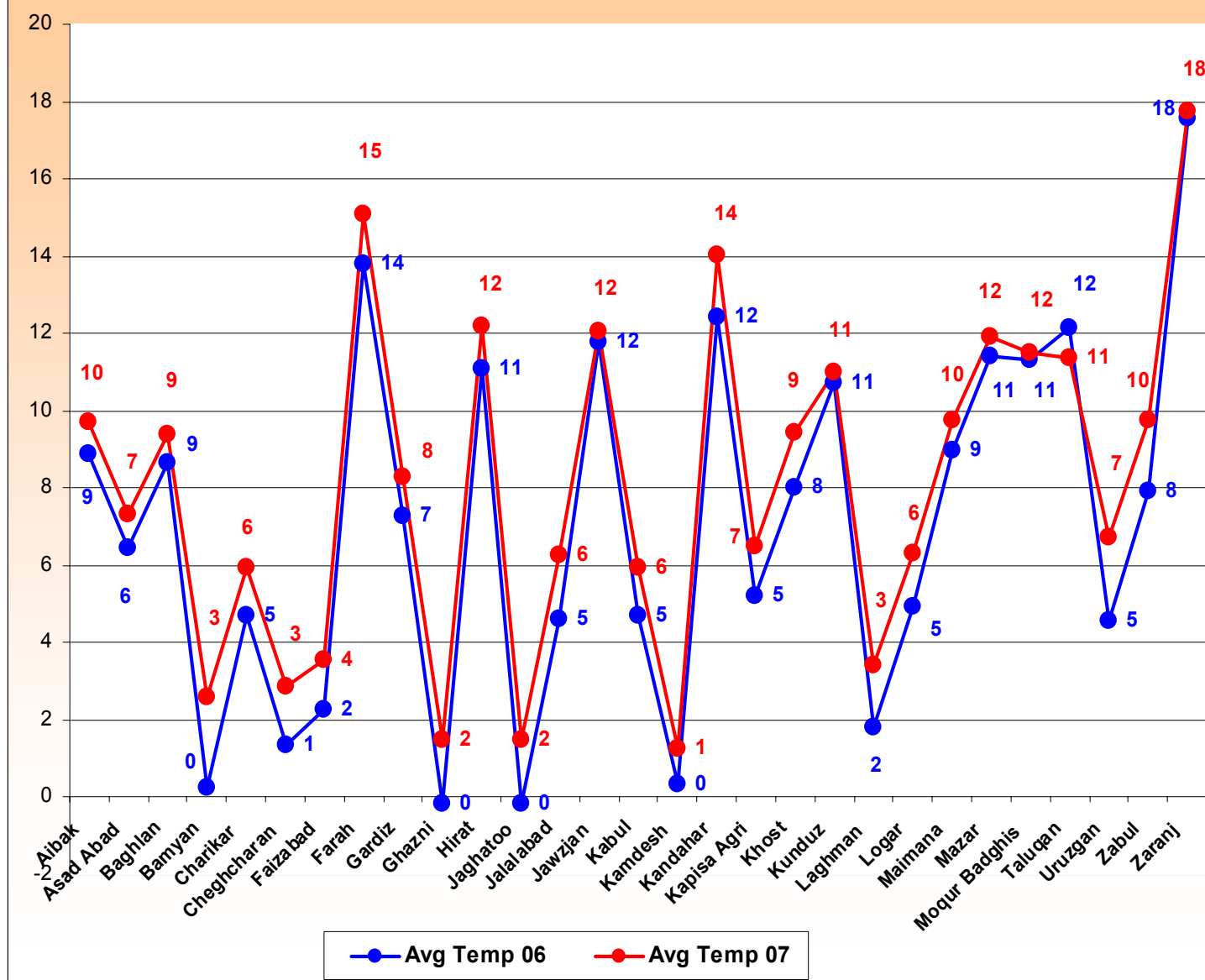
Chart 2



Average Temperature for the Month of November 2007

Average Temperature 2007 Compared with the Same Month of 2006

Chart 3



Comparison of temperature values show increase of temperature during the month of November 2007 over the same month in 2006.

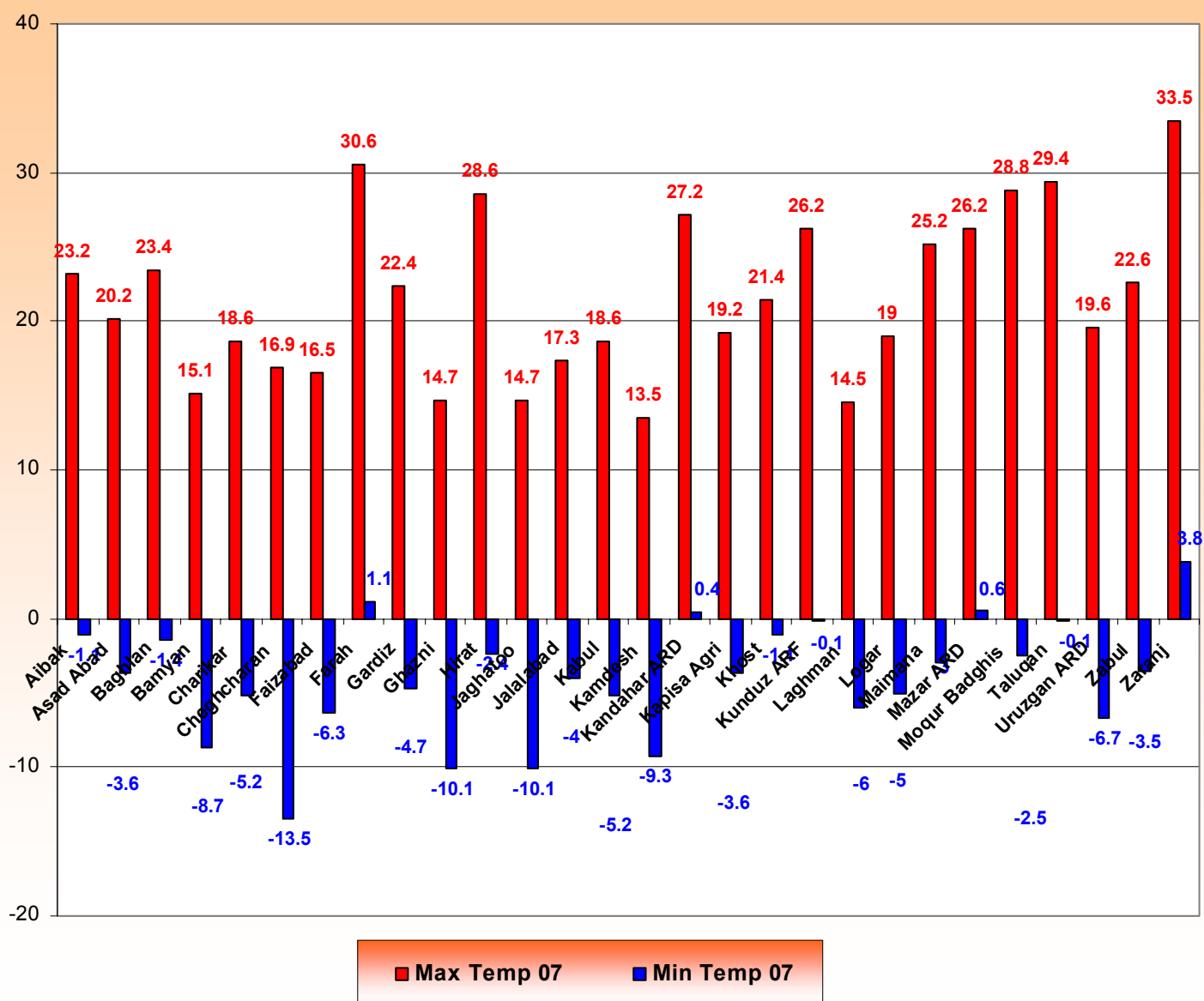
Comparison of temperature value (chart 3) shows an increase of temperature during the month of November 2007 compared to the same month in 2006 across the country. In generally the whole country experienced higher temperature during the month of November 2007

over the same month in 2006 which the temperature 1° C up to 2° C was higher compared to same month of last year. Higher temperature was one of the factors which reduced the rainfall occurrence during the month of November.

Temperature for the Month of November 2007

Minimum and Maximum Temperature November 2007

Chart 4



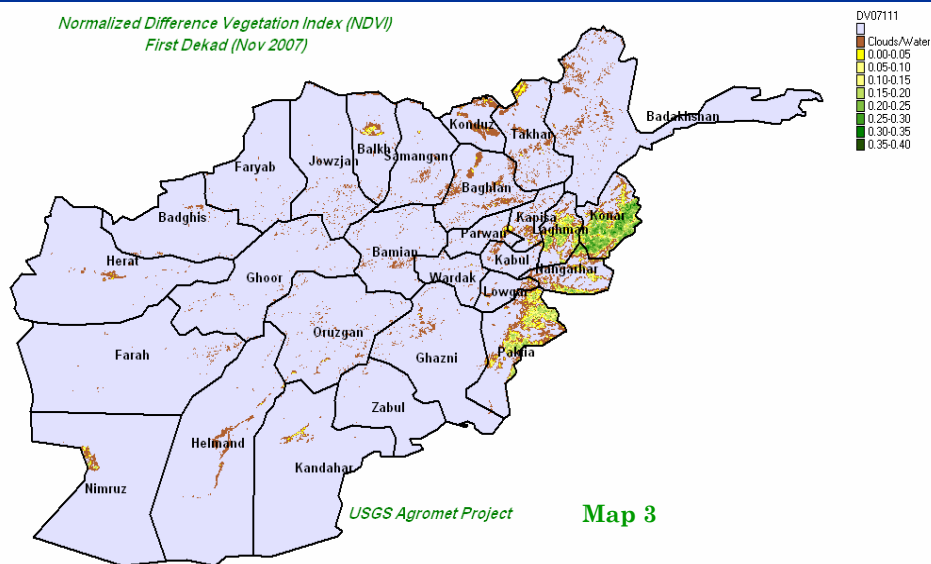
Zaranj center of Nimroz Province with 33 ° C was the warmest area in the country

Chart (4) shows maximum and minimum temperature for the month of November 2007, as chart shows the minimum temperature was at freezing point in most parts of the country except Farah, Kandahar, Mazar and Zaranj where the minimum temperature was above freezing point.

Zaranj with 33 ° C was the warmest area of the country and Cheghcheran with 13.5 ° C experienced extreme cold during the month of November.

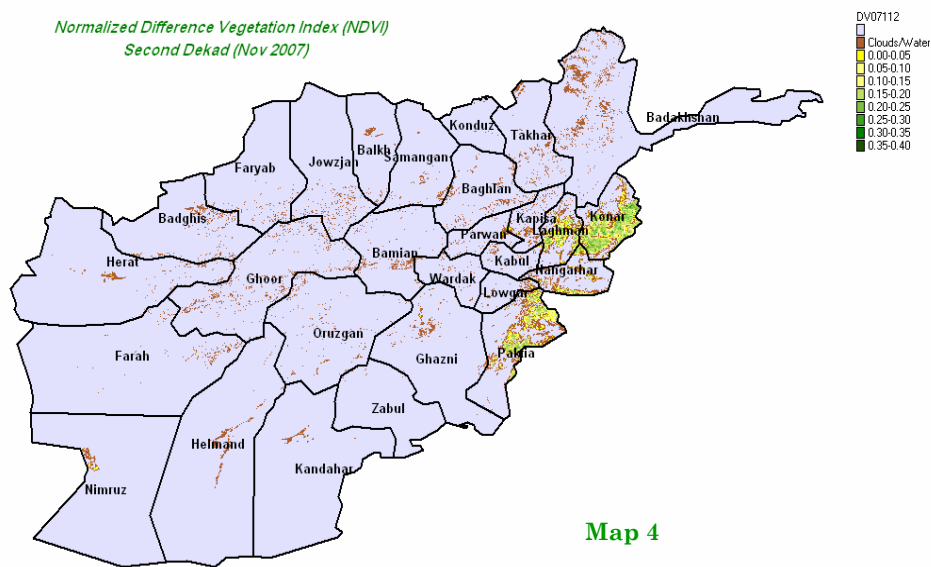
Normalized Difference Vegetation Index (NDVI) (November 2007)

Normalized Difference Vegetation Index (NDVI)
First Dekad (Nov 2007)



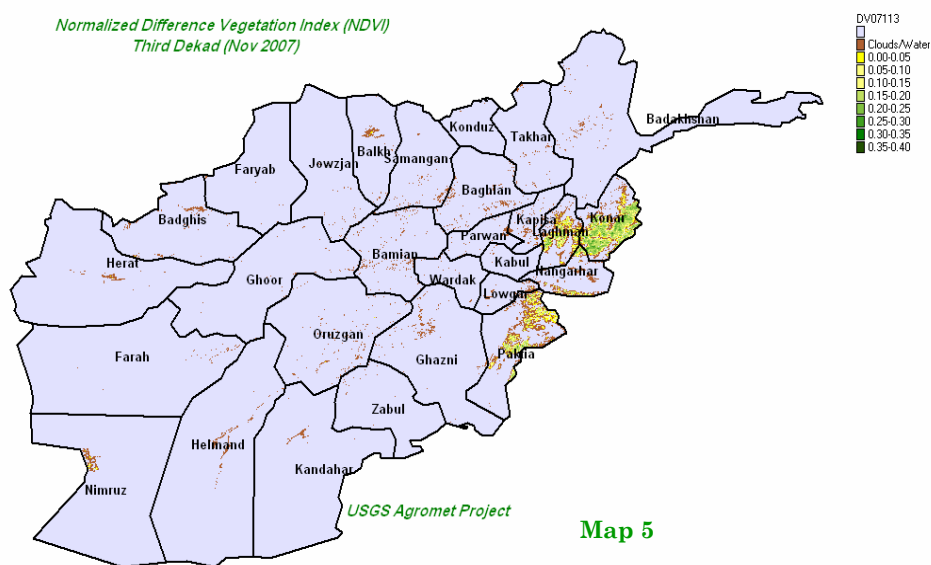
Vegetation Index (NDVI) 1st Dekad of November 2007—Afghanistan

Normalized Difference Vegetation Index (NDVI)
Second Dekad (Nov 2007)



Vegetation Index (NDVI) 2nd Dekad of November 2007—Afghanistan

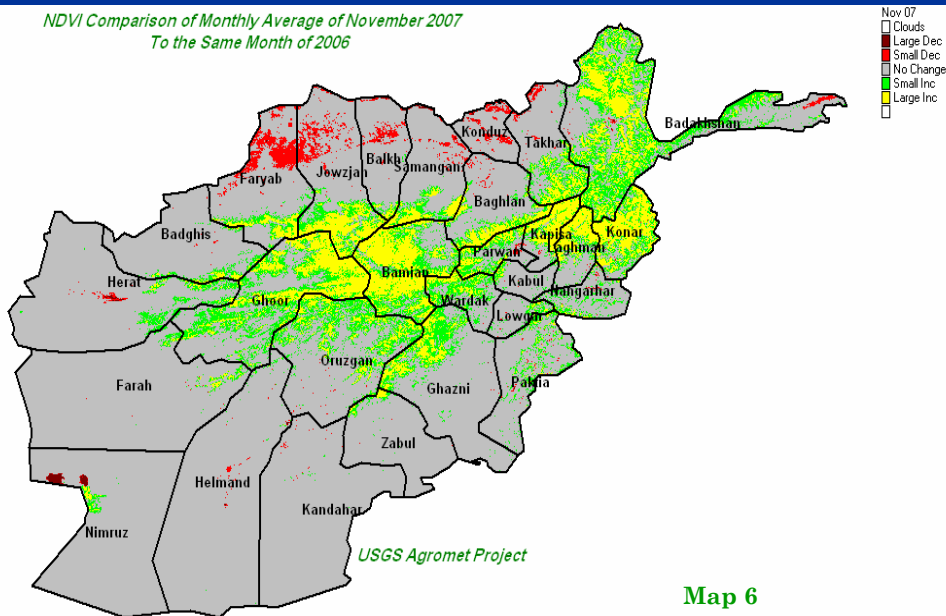
Normalized Difference Vegetation Index (NDVI)
Third Dekad (Nov 2007)



Vegetation Index (NDVI) 3rd Dekad of November 2007—Afghanistan

Comparison of NDVI November 2007

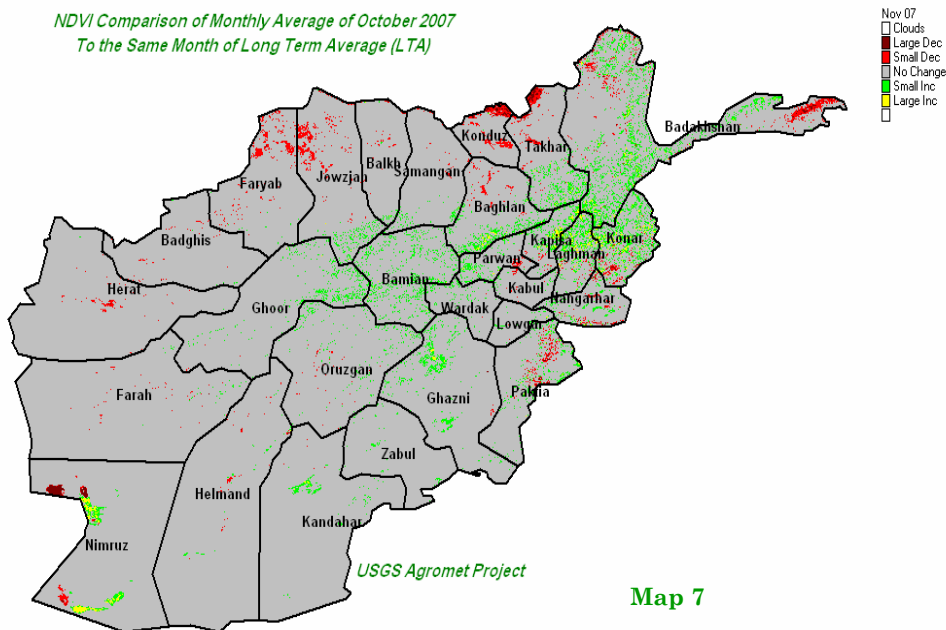
NDVI Comparison of Monthly Average of November 2007
To the Same Month of 2006



Map 6

Vegetation Index: Comparison to Last Year

NDVI Comparison of Monthly Average of October 2007
To the Same Month of Long Term Average (LTA)



Map 7

Vegetation Index: Comparison to Long Term Average

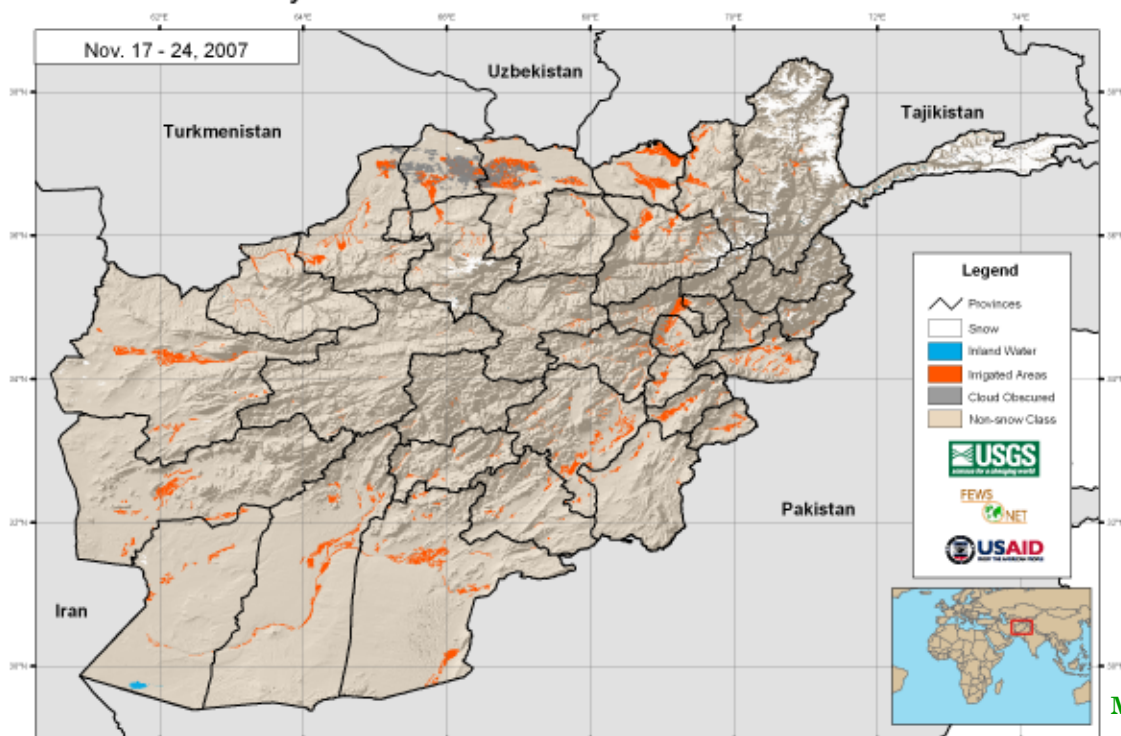
NDVI: November 2007

Comparison of monthly average of NDVI for the month of November 2007 with the same month in 2006 (map 6) shows large increase of NDVI in the Central Highlands, some parts of the Northeastern region and some parts of the Eastern region, small increase of NDVI occurred in limited areas in the Northern region during the month of November 2007 over the same month in 2006. There is no change in NDVI value in the remaining regions of the country in the month of November 2007 compared to the same month in 2006.

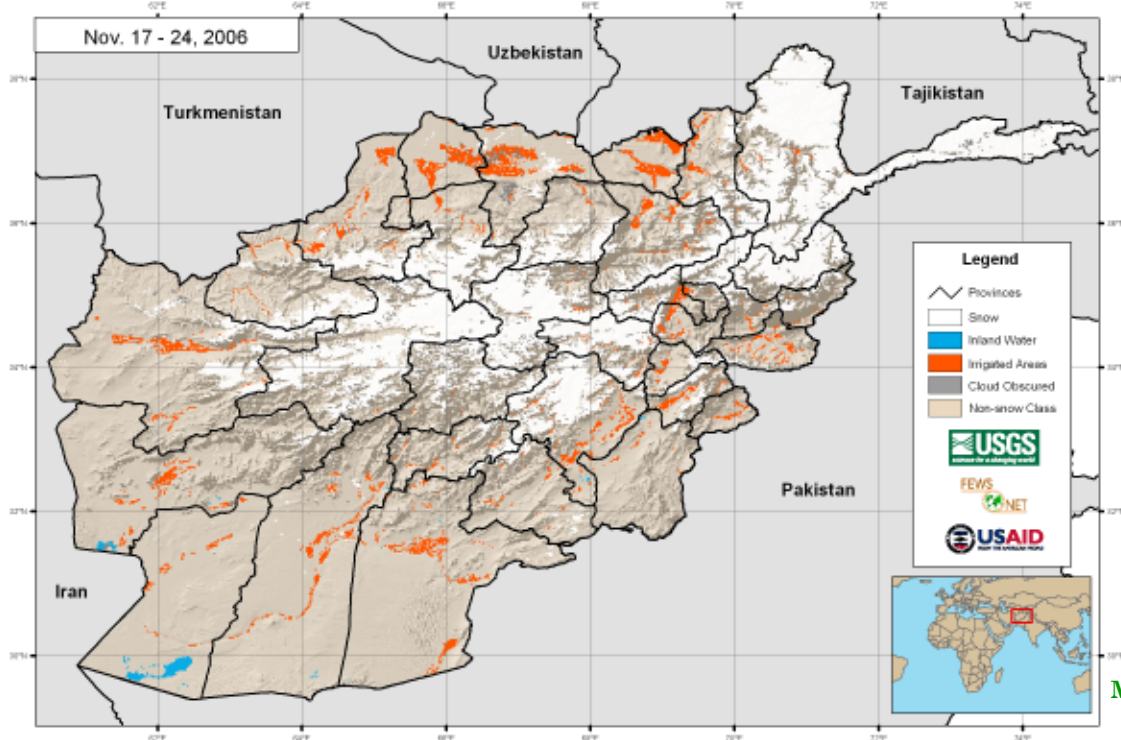
Comparison of NDVI value for the month of November 2007 with the same month of long term average (map 7) shows small increase of NDVI as separated in limited areas in the Central Highlands, some parts of the Eastern region and some parts of the Northeastern region during the month of November 2007 compared to the same month of long term average. No change in NDVI value in the most parts of the country during the month of November 2007 over the same month of long term average.

Comparison of Snow Extent

MODIS 8-day Snow Cover Extent - Current Period 2007 vs 2006



Map 8



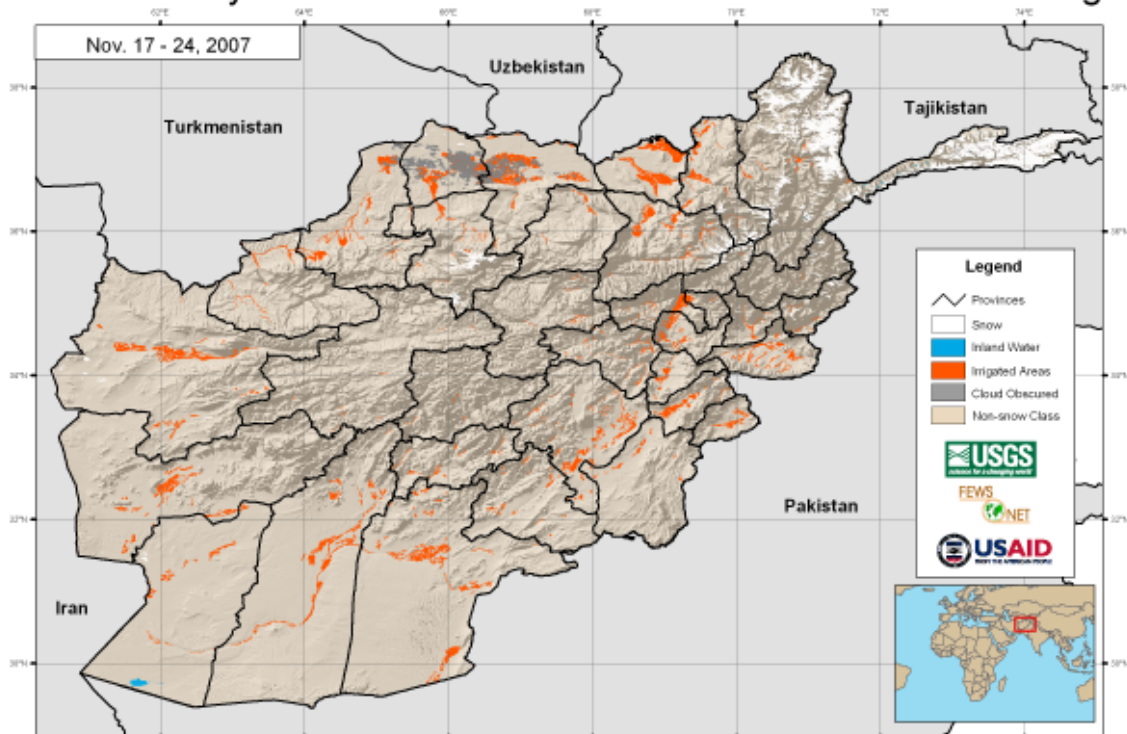
Map 9

Comparison of snow extent for the period (17 – 24) November 2007 with the same period in 2006 (map 8– 9) shows large decrease of snow extent in snow coverage areas during the month of November 2007 compared to the same period in 2006.

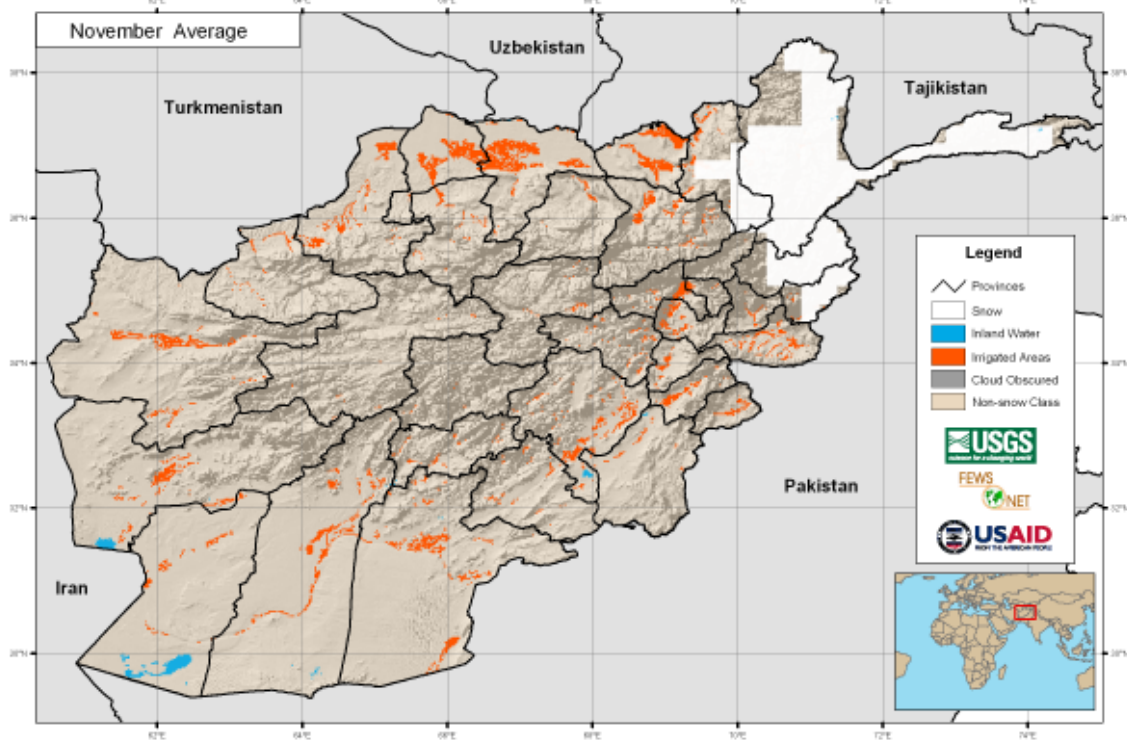
Significant change occurred in snow extent due to lack of snowfall during the month of November 2007 and inadequate snow fall stressed snow recourses. More snow fall is needed to cover the water recourses.

Comparison of Snow Extent

MODIS 8-day Snow Cover Extent - Current vs. Historical Average



Map 10

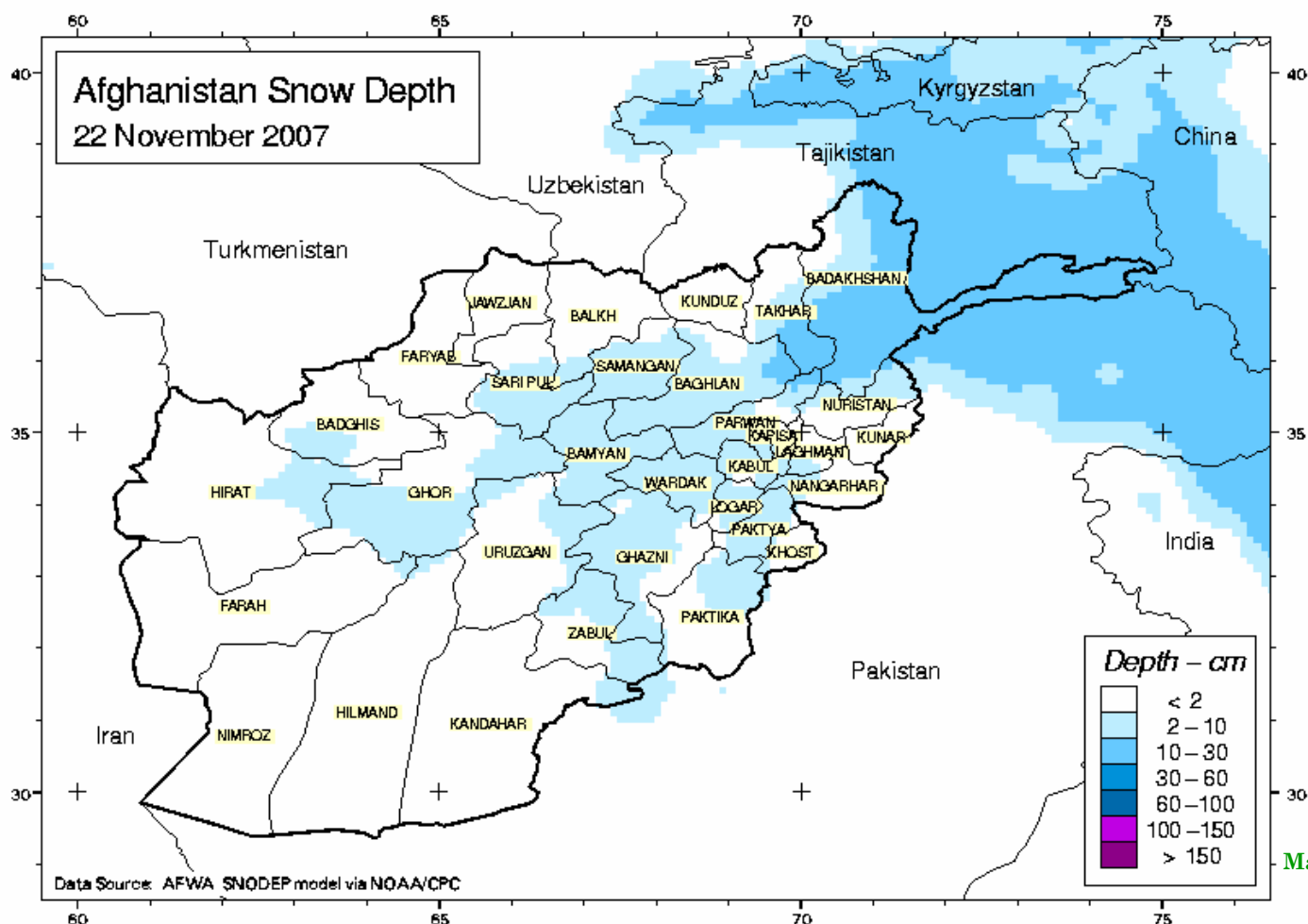


Map 11

Comparison of snow extent for the month of November 2007 with same month of long term average (map 10-11) shows significant decrease in snow extent during the month of November 2007 compared to the

of long term average particularly in the Northeastern mountainous region where above mentioned area is the main recourses of the snow gathering in the country.

Afghanistan Snow Depth for the month of November 2007



Map 12

Map (12) shows the snow depth in different regions and from 2 up to 10 cm has been recorded in Central for the month of November 2007, as figure shows the Highlands and neighboring areas. snow depth is from 10 up to 30 cm for the Northeastern region

For more information please contact:

Mohammad Fahim Zaheer

fahim.zaheer@agriculture.gov.af

fahimzaheer@gmail.com

Cell: 070156738/ 077-9019012

You can download the Afghanistan's Agromet Bulletins from these sites:

<http://www.agriculture.gov.af/farsi/weather.htm>

<http://afghanistan.cr.usgs.gov/agro.asp>